United States Patent Office 3,605,851 Patented Sept. 20, 1971

3,605,851

DIVIDER SCREEN ASSEMBLY

Robert E. Miles and Lloyd C. Mollenkopf, Bloomington, Minn., assignors to Rosemount Partitions Inc., Minneapolis, Minn.

Filed Sept. 22, 1969, Ser. No. 859,760
Int. Cl. A47g 5/00
U.S. Cl. 160—135 12 Claims

ABSTRACT OF THE DISCLOSURE

A divider screen panel assembly comprising support members or columns which permit hinging of the screen panels at an infinite number of angular positions to accommodate the interior designers wishes to avoid stereotyped rectangular layouts only for interior partitions in offices and the like. The panels are made so that they will mount easily onto the support columns, and can be adjusted to the desired angular position at will. Further, the columns are made so that four panels can be supported on one column at 90° to each other. The support members permit the use of curved panels, sound proofing panels, and also have provisions for insertions of glazing strips if less than a full height of panel is desired.

BACKGROUND OF THE INVENTION

(1) Field of the invention

The present invention relates to portable divider screen assemblies for interior partitions which permit hinging of the screen panels relative to each other.

(2) Prior art

Several folding screens have been advanced, and different types of arrangements have been made so that the panels can be set at angles with respect to each other. However, these generally are very complex structures involving a good deal of mechanisms for the fastening members and also a good deal of hand labor in assembly.

For example, U.S. Pat. No. 2,855,037 shows a portable wall or screen which can be used with sections positioned at angles with respect to each other but small resilient inserts that are plugged into fixed holes are used so that only a set number of angular positions can be achieved.

U.S. Pat. No. 538,318 also shows a hinging hospital screen, but here the panels are not readily interchangeable as they are with the present invention.

SUMMARY OF THE INVENTION

The present invention relates to a simply constructed divider screen assembly for use in offices, commercial buildings of various types, hospitals and the like for forming temporary or semi-permanent interior partitions. The individual panel members can be adjusted at angles with respect to each other. The supports comprise tubes having internal collars that in turn threadably support outwardly extending screws passing through slots in the tube. The panels themselves are supported by placing the screws through keyhole shaped openings. The internal collars can be rotated inside the tube at will, thus permitting adjustment of the panels with respect to each other. The units are easy to manufacture, low in cost and are interchangeable. There are no unsightly exterior members visible because the rotating elements are completely inside the support tube.

Further objects of the invention include the formation of simply installed glazing channels which can be positioned at angles just like the panels themselves using a cap at the top of the support tube and a small U-shaped hook which holds the glazing channel at any desired angle. Additionally, extruded members only are used for forming the frames for the panels themselves, which reduces cost. Even the interior collars may be formed with extrusions. A sound absorbing panel construction is also presented for specialized uses.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a divider screen assembly having panels supported on poles or tubes according to the present invention;

FIG. 2 is a fragmentary enlarged elevational view of a support post of FIG. 1;

FIG. 3 is a sectional view taken as on line **3—3** in FIG. 2;

FIG. 4 is an enlarged sectional view showing details of the support collars for the panels;

FIG. 5 is a fragmentary exploded view showing details of the panels and support posts;

FIG. 6 is a fragmentary enlarged transverse sectional view showing the positioning of four panels on a single support post for forming right angle corners, and also showing the degree of movement of the panels individually;

FIG. 7 is a fragmentary enlarged transverse sectional view of a sound proofing panel utilized with the present invention;

FIG. 8 is a fragmentary enlarged sectional view showing a support cap and hook for holding glazing channels; and

FIG. 9 is a sectional view taken as on line **9—9** in FIG. 8.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A divider screen assembly shown generally at **10** in FIG. 1 includes a plurality of individual panel assemblies **11**, **12** and **13** which are supported on connecting posts or tubes **14**. The panel assemblies, as shown, are capable of being positioned at different angles with respect to each other, and as shown with panel **13**, the panel can assume a curved shape to enhance its appearance and make it fit into modern decor more easily. The support posts or columns **14** are each supported on a separate pedestal **15**. The pedestal **15** and the support posts are connected with a tapered fitting member shown in dotted lines at **16** that frictionally locks into a receptacle on the pedestal. The pedestals can be removed if desired and also changed in angle with respect to the support panels. This tapered fitting is a conventional fitting which provides support and stability for the panels.

The support columns **14** each comprise tubes **20** which are, as shown, hollow and circular in cross section. The tubes have panel support collars positioned therein. There are two sets of collars, an upper set and a lower set. Each set has an upper collar **21** and a lower collar **22**. These collars are identical in construction. The collars **21** and **22** of each set are positioned in the interior of the tube with a first tubular insert **25** which could be a cardboard tube or other desired insert and a second long tubular insert **26**. The inserts **25** and **26** support the sets of collars so that the centers of the collars are aligned with provided annular extending slots, for example slots **27** and **28** respectively (see FIG. 5). The slots **27** and **28** extend through the wall of the tube **20**. There are two sets of slots **27** and **28**, one adjacent the upper portions of each pole **20** for the upper set of collars, and one adjacent the lower portions of the pole for the lower set of collars. The slots are positioned so that the panels are supported at two spaced locations. The showing in FIG. 5 is a typical showing. The upper collars **21** of each set have screws **30** threaded therein and extending through the respective slots **27**. The